FST 3-6 Warm Up

1) The weights of a group of astronauts training for a mission to the Moon are in the table below.

Astronaut	1	2	3	4	5	6	7	8	9	10
Weight (lb)	163	115	180	191	121	183	178	107	201	186

a) Find the mean weight and the standard deviation for this set of data.

$\bar{X} = 162.5$ $S_x = 34.76$

b) The gravity on the moon is $\frac{1}{6}$ the gravity of Earth, so weights on the Moon are $\frac{1}{6}$ of weights on Earth. Give the mean weight and standard deviation of this group of astronauts on the Moon.

$\bar{X} = 27.08\overline{3}$ $S_x = 5.793$

c) How will the median, the first quartile, and the range of the data be affected by the transformation in Part b.

They will all change by $\frac{1}{6}$.